GLA UNIVERSITY

SESSION - 2023

PRACTICAL FILE

COMPUTER PROGRAMMING

SECTION AU

Submitted by

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Submitted to

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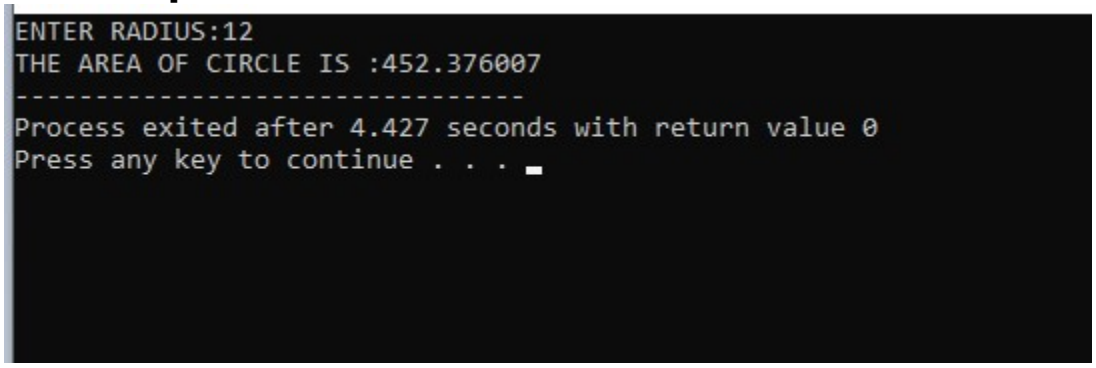
Q1. Write a programme to calculate area of circle by taking data (radius value) from user.

```
#include<stdio.h>
 int main ()
{
    float Radius;
    printf("ENTER RADIUS:");
    scanf ("%f",&Radius);

    float  pi= 3.1415;
    float area = (Radius*Radius*pi);
    printf("THE AREA OF CIRCLE IS :");

    printf("%f", area );

    return 0 ;
}
```

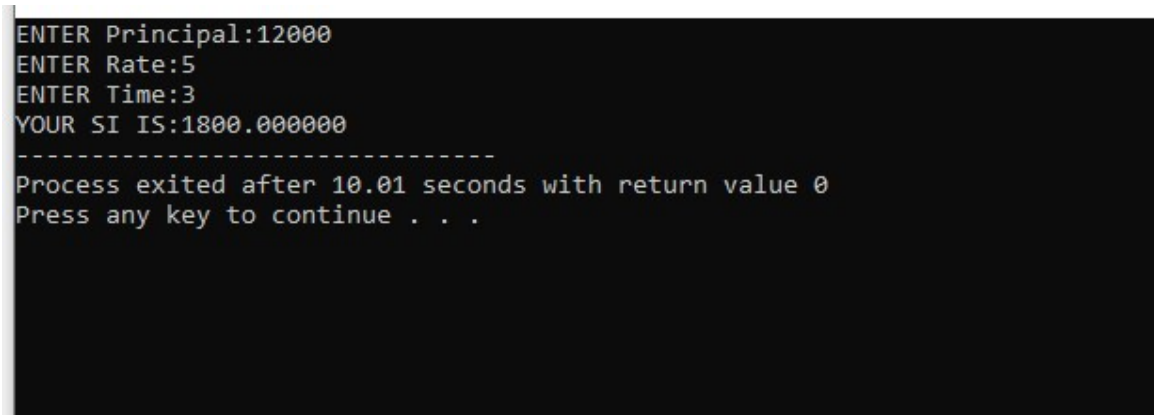
Output



Q2.Write a programme to calculate simple interest by taking data from user.

```
#include<stdio.h>
int main ()
{
 float Principal,Rate,Time,SI;
 printf("ENTER Principal:");
 scanf ("%f",&Principal);
 printf("ENTER Rate:");
 scanf ("%f",&Rate);
 printf("ENTER Time:");
 scanf ("%f",&Time);
 SI  = (Principal*Rate*Time)/100;

  printf("YOUR SI IS:%f",SI );

 return 0 ;
}
```

Output

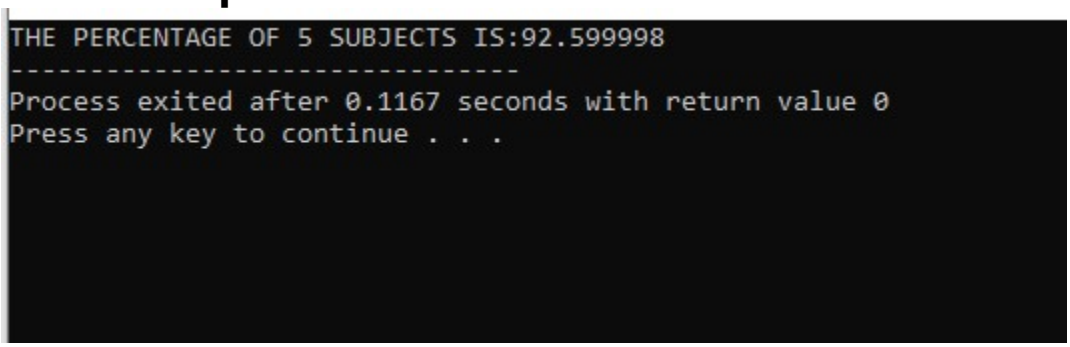


Q3.Write a programme to find the percentage of the marks of 5 subjects.

```
#include<stdio.h>
int main ()
{
      float m1 = 96;   //  maths mark
      float m2= 97;     // physics marks
     float m3= 89;      // hindi marks
      float m4= 90;     // english
      float m5 = 91;   //chemistry
      float percentage =  ( m1+m2+m3+m4+m5)/5;

      printf("THE PERCENTAGE OF 5 SUBJECTS IS:");
      printf("%f",percentage );
```

```
    return 0 ;
}
```

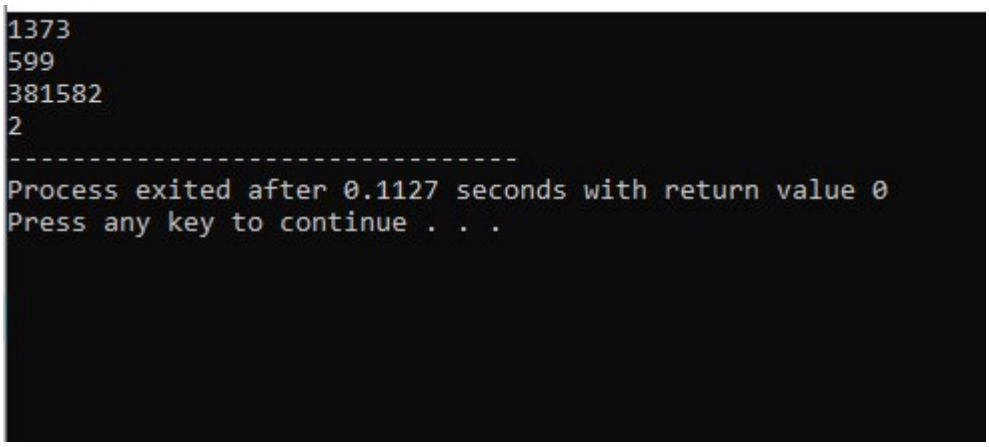
Output



Q4.Arithmetic operations on int data type.

```
#include<stdio.h>
int main ()
{
    int x = 986;
    int y = 387;
    printf("%d",x+y);
  printf("\n%d",x-y);
  printf("\n%d",x*y);
    printf("\n%d",x/y);
    return 0 ;
    }
```

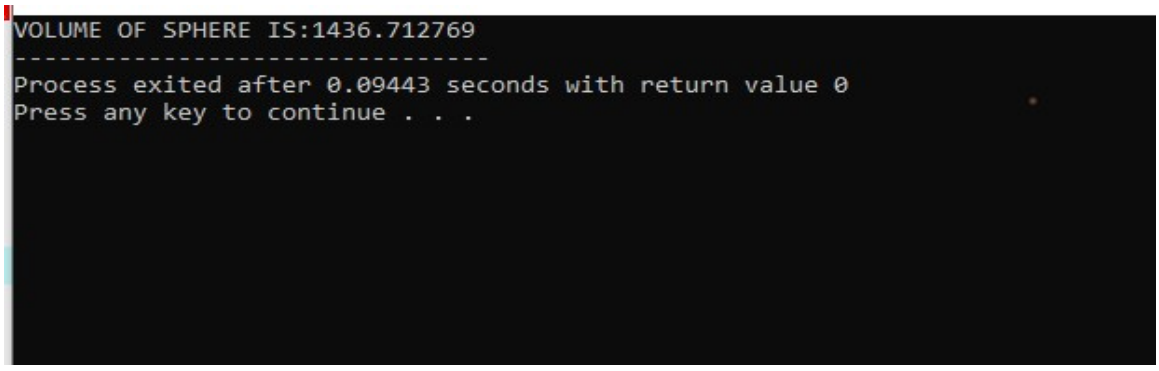
Output



Q5.Write a programme to calulate volume a sphere.

```
      #include<stdio.h>
 int main ()
 {
       float pi = 3.1415;
       float r = 7;
       printf("VOLUME OF SPHERE IS:");
       printf("%f",4*pi*r*r*r/3);

       return 0 ;
}
```

Output



Q6.WAP to check number is Positive or not?

```
#include <stdio

.h>
#include <string.h>
#include <math.h>
int main()
{
	int a;
	printf("ENTER THE NUMBER : ");
	scanf("%d",&a);
	if (a==0)
	printf("NUMBER IS ZERO");
	else
	{
		(a<0)?printf("NUMBER IS
NEGATIVE"):printf("NUMBER IS POSITIVE");
	}
```

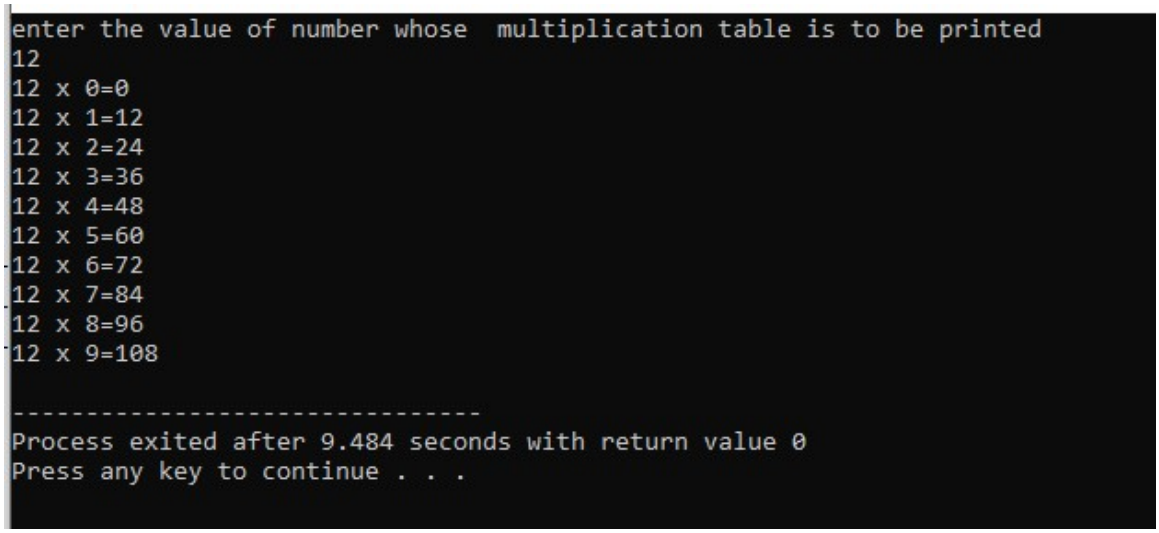
```
ENTER THE NUMBER : 4
NUMBER IS POSITIVE
------------------------
```

```
    return 0;
}
```

Q7.Write a programme to generate multiplication table of a given number.

```
  #include<stdio.h>
   int main ()
 {
       int num;
       printf("enter the value of number whose
multiplication table is to be printed\n");
       scanf("%d",&num);
       for (int i=0;i<10;i++)
        {
            printf("%d x %d=%d\n",num,i,i*num);
        }
        return 0 ;
        }
```

Output



Q8. WAP to find sum of first n natural numbers.

```
#include<stdio.h>
  int main ()
 {
     int n, sum=0;
     printf("enter the last natural number you
want the sum of\n");
     scanf("%d",&n);
     for (int i=1; i <= n; i++)
     {
         sum +=i;
     }
       printf(" sum of first %d natural number is :
%d\n",n,sum);
     return 0 ;
     }
```

Output

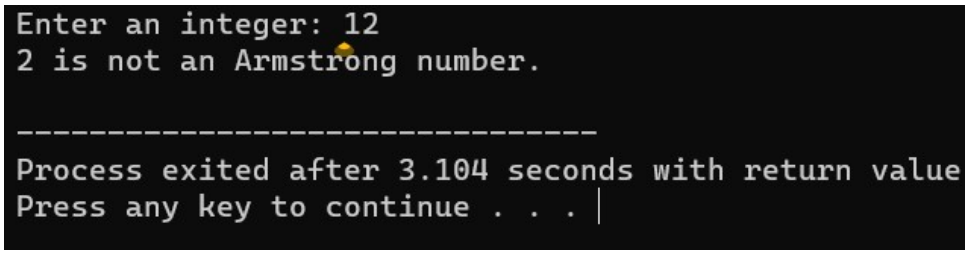
```
enter the last natural number you want the sum of
543
 sum of first 543 natural number is : 147696

--------------------------------
Process exited after 2.925 seconds with return value 0
Press any key to continue . . .
```

Q9. ARMSRTROG NUMBER

```
#include <stdio.h>
#include <math.h>
int main() {
    int num, org, rem, result = 0, a = 0;
    printf("Enter an integer: ");
    scanf("%d", &num);
    org = num;
    /*while (org != 0) {
        org /= 10;
        a++;
    }*/
    int temp = num ,sum = 0;
    while (num > 0) {
        rem = num % 10;
```

```
        sum = sum + pow(rem, a);
        num /= 10;
    }
    if (sum == temp) {
        printf("%d is an Armstrong number.\n", sum);
    } else {
        printf("%d is not an Armstrong number.
\n",sum);
    }
    return 0;
}
```

OUTPUT-



Q10.WAP to print REVERSE of a number?

```
#include <stdio.h>
int main() {
    int n,rev=0,r;
    printf("ENTER THE NUMBER : ");
    scanf("%d",&n);
      while(n!=0)
      {
```

```
        r=n%10;
        rev=(rev*10+r);
        n=n/10;
    }
    printf("REVERSE OF NUMBER : ");
    printf("%d",rev);
```

```
ENTER THE NUMBER : 321
REVERSE OF NUMBER : 123
--------------------------------
```

```
}
```

Q11.SWAP OF NUMBER

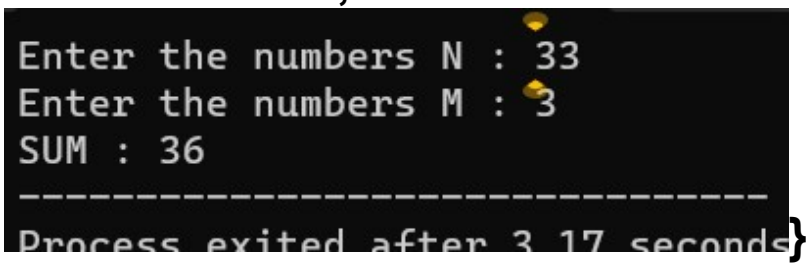
```
Enter the numbers A and B : 23 33
BEFORE SWAPING (A=23) and (B=33)
AFTER  SWAPING (A=33) and (B=23)
```

```
#include<stdio.h>
int main()
{
    int a,b;
    printf("Enter the numbers A and B : ");
    scanf("%d%d",&a,&b);
    int  *p=&a ,*q=&b;
    int temp;
    printf("BEFORE SWAPING (A=%d) and (B=%
d) \n",*p,*q);
    temp=*p;
    *p=*q;
    *q=temp;
    printf("AFTER  SWAPING (A=%d) and (B=%
d)",*p,*q);
```

```
}
```

Q12.WAP TO PRINT ADD AND SUB USING FUNCTION

```
#include<stdio.h>
int add(int a, int b)
{
    return a+b;
```




```
}

int main()
{
    int n,m;
    printf("Enter the numbers N : ");
    scanf("%d",&n);
    printf("Enter the numbers M : ");
    scanf("%d",&m);
    int x=add(n,m);
    printf("SUM : %d",x);


// power function
```

```
}
```

Q13.WAP to Check Number is even or odd?

```
#include <stdio.h>
#include <string.h>
#include <math.h>
int main()
{
      int a;
      printf("ENTER THE NUMBER : ");
      scanf("%d",&a);
      (a/2==0)?printf("NUMBER IS
EVEN"):printf("NUMBER IS ODD");
```


```
      return 0;
}
```

Q14.WAP to find factorial of a Number?

```
#include <stdio.h>
int main() {
   int n,fact=1;
   printf("Enter the number: ");
   scanf("%d", &n);
   for(int i=n;i>0;i--)
      {
```

```
        fact=fact*i;
    }
    printf("Factorial of numbers %d is %d",n,fact);
```

```
Enter the number: 8
Factorial of numbers 8 is 40320
--------------------------------
```

```
    return 0;
}
```

Q15. CHECK NUMBER IS PERFECT OR NOT

```
#include <stdio.h>

int main() {
    int num, sum = 0;

    // Input a number from the user
    printf("Enter a positive integer: ");
    scanf("%d", &num);

    // Find the sum of proper divisors
    for (int i = 1; i < num; i++) {
        if (num % i == 0) {
            sum += i;
        }
    }

    // Check if the number is a perfect number
    if (sum == num) {
        printf("%d is a perfect number.\n", num);
```

```
    } else {
        printf("%d is not a perfect number.\n", num);
    }
```

```
Enter a positive integer: 147
147 is not a perfect number.
```

```
    return 0;
}
```

Q16..WAP to find factors of a Number?

```
#include <stdio.h>
int main() {
    int n,count=0;
    printf("ENTER THE NUMBER : ");
    scanf("%d",&n);
      for(int i=1; i<=n ;i++)
      {
      if(n%i==0)
            printf("%d,",i);
```

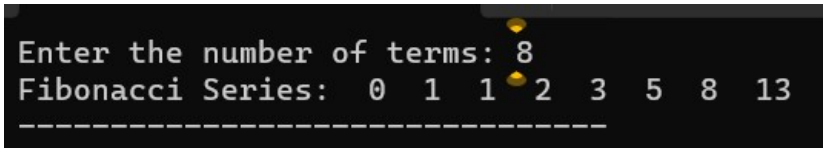
```
ENTER THE NUMBER : 6
1,2,3,6,
------------------------
```

```
      }
}
```

Q17.WAP to print Fibonacci Series?

```
#include <stdio.h>
int main() {
```

```
    int n, a=0, b=1, fb;
    printf("Enter the number of terms: ");
    scanf("%d", &n);
    printf("Fibonacci Series: ");
    for(int i=1 ; i<=n ; i++)
            {
                printf(" %d ", a);
          fb = a + b;
          a = b;
          b = fb;
```



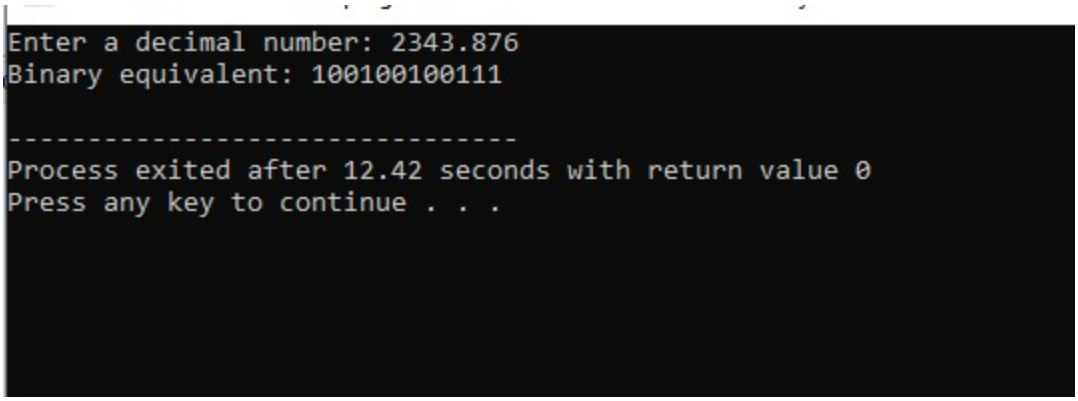

```
}
    return 0;
}
```

Q18. WAP to convert a decimal number into binary.

```
    #include <stdio.h>

    void decimalToBinary(int num) {
    int binary[32];
    int index = 0;

    while (num > 0) {
        binary[index] = num % 2;
        num = num / 2;
```

```
        index++;
    }

    printf("Binary equivalent: ");
    for (int i = index - 1; i >= 0; i--) {
        printf("%d", binary[i]);
    }
    printf("\n");
}

int main() {
    int decimalNumber;

    printf("Enter a decimal number: ");
    scanf("%d", &decimalNumber);

    if (decimalNumber < 0) {
        printf("Please enter a non-negative number.
\n");
        return 1;
    }

    decimalToBinary(decimalNumber);

    return 0;
}
```

Output

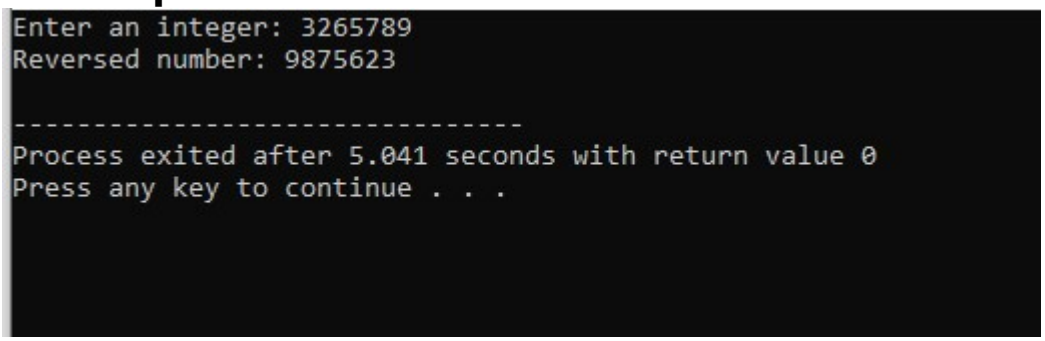


Q19. WAP to reverse a number.

```
#include <stdio.h>

  int main() {
  int number, reversedNumber = 0, remainder;

   printf("Enter an integer: ");
   scanf("%d", &number);

   while (number != 0) {
   remainder = number % 10;
   reversedNumber = reversedNumber * 10 +
remainder;
   number /= 10;
  }

  printf("Reversed number: %d\n",
reversedNumber);

  return 0;
```

}

Output



Q20.WAP to check number is Palindrome or not?

```
#include <stdio.h>
int main() {
   int n,rev=0,r,org;
   printf("ENTER THE NUMBER : ");
   scanf("%d",&n);
   org=n;
     while(n!=0)
     {
          r=n%10;
          rev=(rev*10+r);
          n=n/10;
     }
     if (rev==org)
          printf("PLAINDROME");
     else
          printf("NOT  PLAINDROME");
```

```
ENTER THE NUMBER : 121
PLAINDROME
--------------------------------
```

}

Q21.WAP to count the digits of Number?

```
#include <stdio.h>
int main()
{
      int a;
      printf("ENTER THE NUMBER : ");
      scanf("%d",&a);
      if (a%2==0)
      printf("NUMBER IS EVEN");
      else
      printf("NUMBER IS ODD");
```

```
ENTER THE NUMBER : 34234
5
--------------------------------
```

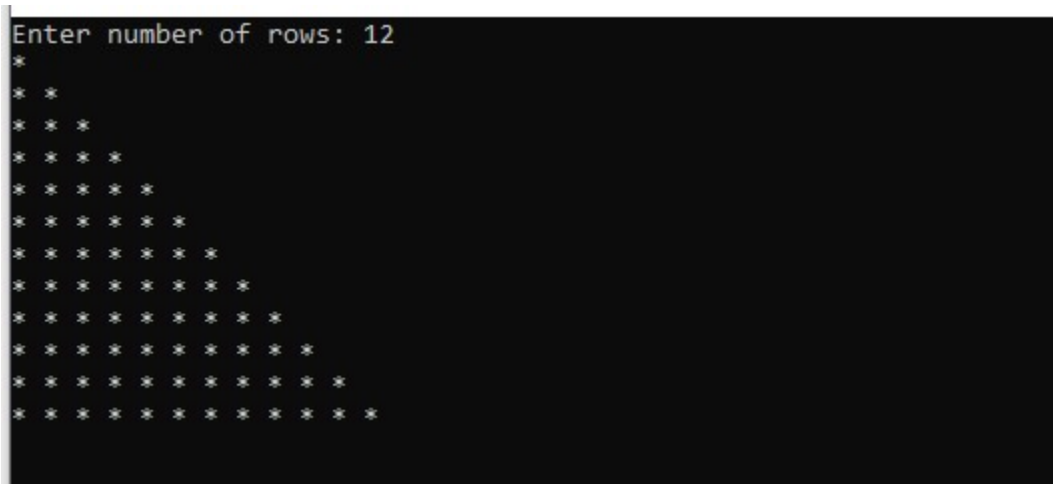
```
   return 0;
}
```

Q22. WAP to print star pattern by giving data of no of row.

```
  #include <stdio.h>
```

```
 int main() {
 int rows, i, j;

printf("Enter number of rows: ");
scanf("%d", &rows);

for (i = 0; i < rows; i++) {
    for (j = 0; j <= i; j++) {
        printf("* ");
    }
    printf("\n");
}

return 0;
}
```

Output

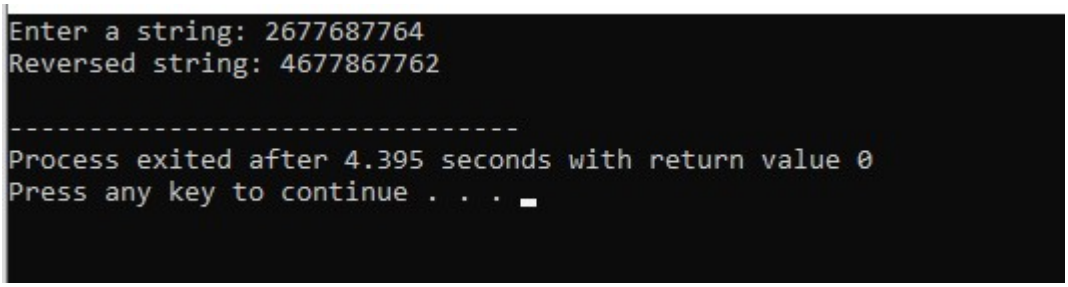


Q23.Write a programme to reverse a string.

```
#include <stdio.h>
#include <string.h>

void reverseString(char* str) {
 int length = strlen(str);
 int i, j;
 char temp;

 for (i = 0, j = length - 1; i < j; i++, j--) {
    temp = str[i];
    str[i] = str[j];
```

```
        str[j] = temp;
    }
}

int main() {
    char str[100];

    printf("Enter a string: ");
    fgets(str, sizeof(str), stdin);



    if (str[strlen(str) - 1] == '\n') {
        str[strlen(str) - 1] = '\0';
    }

    reverseString(str);

    printf("Reversed string: %s\n", str);

    return 0;
}
```

output



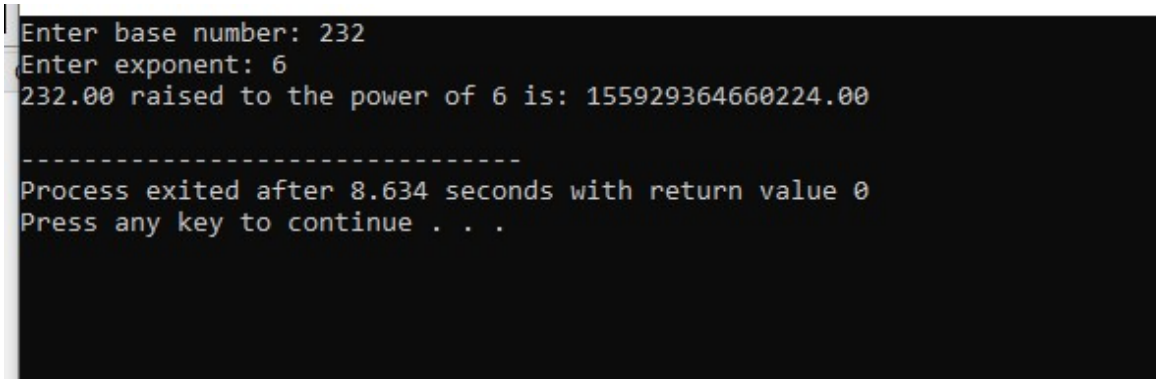
Q24.Write a programme to calculate the power of a number.

```
#include <stdio.h>


double power(double base, int exponent) {
double result = 1.0;


 for (int i = 0; i < exponent; i++) {
   result *= base;
}
```

```
    return result;
    }

    int main() {
    double base, result;
    int exponent;


    printf("Enter base number: ");
    scanf("%lf", &base);

    printf("Enter exponent: ");
    scanf("%d", &exponent);


    result = power(base, exponent);


    printf("%.2lf raised to the power of %d is: %.2lf
\n", base, exponent, result);

    return 0;
```

}

Output

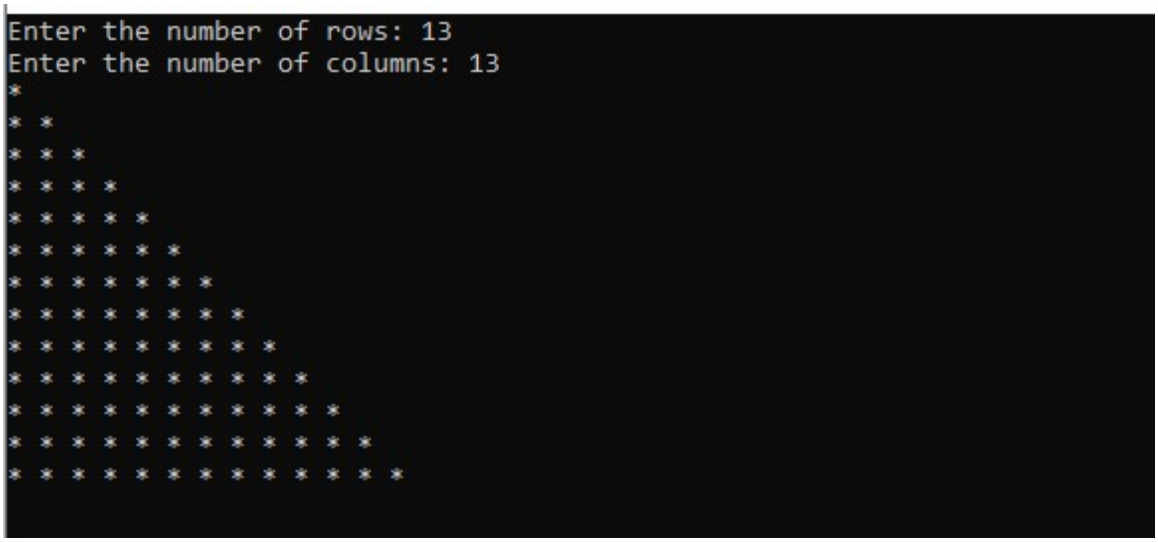


Q25.Write a programme to print triangle pattern by selecting row and column.

```
#include <stdio.h>
void printTriangle(int rows, int columns) {
 int i, j;

   for (i = 1; i <= rows; i++) {
   for (j = 1; j <= i && j <= columns; j++) {
      printf("* ");
```

```
        }
        printf("\n");
    }
}

int main() {
    int rows, columns;

    printf("Enter the number of rows: ");
    scanf("%d", &rows);
    printf("Enter the number of columns: ");
    scanf("%d", &columns);

    printTriangle(rows, columns);

    return 0;
}
```

Output


Enter the number of rows: 13
Enter the number of columns: 13
*
* *
* * *
* * * *
* * * * *
* * * * * *
* * * * * * *
* * * * * * * *
* * * * * * * * *
* * * * * * * * * *
* * * * * * * * * * *
* * * * * * * * * * * *
* * * * * * * * * * * * *